

2012 Scheme

QP CODE: 112006

Reg. No:

First year B.Pharm Degree Supplementary Examinations June 2024 Pharmaceutical Chemistry - II

(Organic Chemistry)

Time: 3 Hours

Total Marks: 100

- Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space
- Answer all parts of a single question together • Leave sufficient space between answers
- Write equations wherever necessary.

Essay

(3x10=30)

1. What is Huckel's rule. Explain the concept of aromaticity with suitable example. Give an account of stability of benzene based on heat of hydrogenation.
2. Write the mechanism involved in the addition of hydrogen halides and addition of water to alkynes. Write a note on stereospecific reduction of alkynes.
3. Give an account on the acidity of carboxylic acids with suitable examples. Briefly write about intermolecular association and the stability of carboxylate anion.

Short notes

(14x5=70)

4. Give any three important reactions of phenol.
5. Explain various types of hybridization giving suitable examples.
6. What is isomerism. Write about structural isomerism with suitable examples.
7. Give the classification and relative reactivities of amines.
8. Write the mechanism involved in Benzoin condensation and Oppenauer oxidation.
9. Briefly explain electrometric and mesomeric effects with suitable examples.
10. Give the mechanism involved in Reimer Tiemann reaction with suitable example.
11. Give an account of selectivity of various halogens towards free radical substitution reactions.
12. Give any three general methods of preparation of alkyl halides.
13. Write the structures for the following IUPAC names.
 - a) 1,1 – dimethyl -3- cyclohexanol
 - b) 3-ethyl-4, 4-dimethylheptane
 - c) 3,5-dimethyl-4-propylhept-1-en-6-yne
 - d) 5-Oxo-3-bromo octanoic acid
 - e) 2-Chloro pentanal
14. Explain Bayer's oxidation with suitable examples.
15. Explain stability and 1, 4 addition reactions of conjugated dienes.
16. Classify alcohols with suitable examples. Write briefly on hydrogen bonding in alcohols.
17. Predict the products of the following reactions.
 - a) $C_6H_5CHO + NH_2-NH_2$
 - b) $C_6H_5CHO + (CH_3CO)_2O + CH_3COONa$
 - c) $CH_3CHO + HCN$
 - d) $C_6H_5NH_2 + HNO_2 + HCl$
 - e) $CH_3CHO + NH_2OH.HCl$
